

Claims

Sub a17

1. A highback for use with a gliding board component that interfaces with a rider's leg and is supportable by a gliding board, the highback comprising:
- an upright support member constructed and arranged to be contacted by and to support a rear portion of the rider's leg, the support member including a lower portion and an upper portion, the support member being comprised of at least a first material having a first stiffness extending continuously from an upper end of the upper portion to at least a lower end of the upper portion; and
- a pair of mounting locations integrally formed with the support member and being disposed on opposing sides of the lower portion thereof for mounting the highback to the gliding board component, the mounting locations being comprised of a second material that is different from the first material and has a second stiffness that is different from the first stiffness.

2. The highback according to claim 1, wherein the first stiffness is greater than the second stiffness.

3. The highback according to claim 2, wherein the lower portion includes a heel cup configured to hold a heel portion of a boot, the heel cup being comprised substantially of the second material.

4. The highback according to claim 3, wherein the support member includes an upper margin along the upper end of the upper portion thereof comprised of a material that is different from the first material and has a stiffness that is less than the first stiffness.

5. The highback according to claim 4, wherein the support member further includes opposing side margins along the upper portion thereof comprised of a material that is different from the first material.

6. The highback according to claim 5, wherein the side margins extend from the upper margin to the heel cup.

4/1. The highback according to claim ~~2~~<sup>3</sup>, wherein at least one of the upper margin and the side margins is comprised of the second material.

5/8. The highback according to claim ~~7~~<sup>4</sup>, wherein each of the upper margin and the side margins is comprised of the second material.

Sub 61 9. The highback according to claim 3, wherein the first material extends into a portion of the heel cup.

Sub A37 10. The highback according to claim 2, further comprising a forward lean actuator mount that is constructed and arranged to support a forward lean actuator thereon, the forward lean actuator mount being disposed on the first material at the lower end of the upper portion.

10/11. The highback according to claim ~~10~~<sup>19</sup>, wherein the forward lean actuator mount is integrally formed with the first material.

12. The highback according to claim 1, wherein the support member has a contoured configuration that is compatible with the rear portion of the rider's leg.

13. The highback according to claim 1, wherein the support member includes a spine extending along the length thereof, the first material extending along a substantial portion of the spine of the support member.

14. The highback according to claim 1, wherein the first material forms a cassette that is supported on the support member.

15. The highback according to claim ~~14~~<sup>9</sup>, wherein the cassette includes a body portion and a peripheral flange extending from the body portion, the flange being attached to the support member to connect the cassette thereto.

Sub A48 16. The highback according to claim 15, wherein the support member is molded to the flange.

~~22~~  
~~17~~ The highback according to claim ~~16~~<sup>21</sup>, wherein the flange has a plurality of holes that receive a portion of the support member therethrough.

Sub 057 ~~18~~ The highback according to claim 1, wherein the first material is a composite and the second material is a plastic material that is molded to the composite.

~~July 12~~ ~~19~~ The highback according to claim 2, further comprising a pair of lateral ears supported on the opposing sides of the lower portion, the mounting locations being disposed on the lateral ears.

~~12~~ ~~20~~ The highback recited in claim 1, wherein the gliding board is a snowboard and the component is a snowboard component.

~~13~~ ~~21~~ The highback recited in claim ~~20~~<sup>12</sup>, in combination with the snowboard component, the highback being mounted on the snowboard component.

~~14~~ ~~22~~ The combination recited in claim ~~21~~<sup>13</sup>, wherein the snowboard component includes a snowboard binding having a baseplate, the highback being pivotally mounted to the baseplate.

~~15~~ ~~23~~ The combination recited in claim ~~22~~<sup>14</sup>, wherein the snowboard binding includes at least one adjustable strap mounted to the baseplate to secure a snowboard boot.

~~16~~ ~~24~~ The combination recited in claim ~~22~~<sup>14</sup>, wherein the snowboard binding is a step-in binding.

~~17~~ ~~25~~ The combination recited in claim ~~21~~<sup>13</sup>, wherein the snowboard component includes a snowboard boot, the highback being pivotally mounted to the snowboard boot.

~~18~~ ~~26~~ The combination recited in claim ~~21~~<sup>13</sup>, wherein the snowboard component includes a detachable binding interface that is constructed and arranged to interface a snowboard boot with a snowboard binding.

Sub 96)

27. A highback for use with a gliding board component that interfaces with a rider's leg and is supportable by a gliding board, the highback comprising:  
an upright support member including an upper portion and a heel cup integrally formed with the upper portion, the upper portion being constructed and arranged to be contacted by and to support a rear portion of the rider's leg, the heel cup being configured to hold a heel portion of a boot, the upper portion being comprised of a first material and the heel cup being comprised substantially of a second material that is different from the first material, the first material having a first stiffness and the second material having a second stiffness that is less than the first stiffness.

28. The highback according to claim 27, wherein the support member includes an upper margin along the upper end of the upper portion thereof comprised of a material that is different from the first material and has a stiffness that is less than the first stiffness.

Sub 97)

29. The highback according to claim 28, wherein the support member further includes opposing side margins along the upper portion thereof comprised of a material that is different from the first material.

30. The highback according to claim 29, wherein the side margins extend from the upper margin to the heel cup.

31. The highback according to claim 30, wherein at least one of the upper margin and the side margins is comprised of the second material.

32. The highback according to claim 31, wherein each of the upper margin and the side margins is comprised of the second material.

33. The highback according to claim 27, wherein the first material extends into a portion of the heel cup.

34. The highback according to claim 27, further comprising a forward lean actuator mount that is constructed and arranged to support a forward lean actuator thereon, the

486065.1

forward lean actuator mount being disposed on the first material at the lower end of the upper portion.

<sup>43</sup>~~35~~. The highback according to claim <sup>42</sup>~~34~~, wherein the forward lean actuator mount is integrally formed with the first material.

<sup>30</sup>~~36~~. The highback according to claim <sup>24</sup>~~27~~, wherein the support member has a contoured configuration that is compatible with the rear portion of the rider's leg.

<sup>31</sup>~~37~~. The highback according to claim <sup>24</sup>~~27~~, wherein the support member includes a spine extending along the length thereof, the first material extending along a substantial portion of the spine of the support member.

<sup>32</sup>~~38~~. The highback according to claim <sup>24</sup>~~27~~, wherein the first material forms a cassette that is supported on the support member.

<sup>33</sup>~~39~~. The highback according to claim <sup>32</sup>~~38~~, wherein the cassette includes a body portion and a peripheral flange extending from the body portion, the flange being attached to the support member to connect the cassette thereto.

Sub a9 > ~~40~~. The highback according to claim 39, wherein the support member is molded to the flange.

<sup>45</sup>~~41~~. The highback according to claim <sup>44</sup>~~40~~, wherein the flange has a plurality of holes that receive a portion of the support member therethrough.

Sub a10 > ~~42~~. The highback according to claim 27, wherein the first material is a composite and the second material is a plastic material that is molded to the composite.

Sub C17 ~~43~~. The highback according to claim 27, further comprising a pair of lateral ears supported on the opposing sides of the heel cup, the mounting locations being disposed on the lateral ears.

486065.1

35  
44.

The highback recited in claim 27, wherein the gliding board is a snowboard and the component is a snowboard component.

36  
45.

The highback recited in claim 35, in combination with the snowboard component, the highback being mounted on the snowboard component.

37  
46.

The combination recited in claim 36, wherein the snowboard component includes a snowboard binding having a baseplate, the highback being pivotally mounted to the baseplate.

38  
47.

The combination recited in claim 37, wherein the snowboard binding includes at least one adjustable strap mounted to the baseplate to secure a snowboard boot.

39  
48.

The combination recited in claim 38, wherein the snowboard binding is a step-in binding.

40  
49.

The combination recited in claim 39, wherein the snowboard component includes a snowboard boot, the highback being pivotally mounted to the snowboard boot.

41  
50.

The combination recited in claim 40, wherein the snowboard component includes a detachable binding interface that is constructed and arranged to interface a snowboard boot with a snowboard binding.

Sub am>

51. A snowboard binding for securing a snowboard boot to a snowboard, the snowboard binding comprising:
- a baseplate that is mountable to the snowboard;
  - a heel hoop disposed at a heel end of the baseplate; and
  - a highback pivotally supported by the baseplate adjacent the heel hoop, the highback being constructed and arranged to be contacted by and to support a rear portion of a rider's leg, the highback including:
    - an upper region that cooperates with the heel hoop to transmit forces between the rider's leg and the snowboard, the upper region being comprised of a first material

having a first stiffness; and

a lower region integrally formed with the upper region, the lower region being pivotally mounted to the baseplate, the lower region being comprised of a second material that is different from the first material and having a second stiffness that is less than the first stiffness.

48  
52.

47

The snowboard binding according to claim 51, wherein the lower region includes a heel cup configured to hold a heel portion of the snowboard boot, the heel cup being substantially comprised of the second material.

49  
53.

48

The snowboard binding according to claim 52, wherein the lower region includes a pair of mounting locations disposed on opposing sides of the heel cup, the mounting locations being comprised of the second material.

50  
54.

49

The snowboard binding according to claim 53, wherein the lower region includes a pair of lateral ears supported on the opposing sides of the heel cup, the lateral ears being comprised of the second material, the mounting locations being disposed on the lateral ears.

51  
55.

50

The snowboard binding according to claim 54, wherein the first material extends into a portion of the heel cup.

52  
56.

49

The snowboard binding according to claim 51, wherein the lower region includes a pair of mounting locations that are pivotally mounted to the baseplate, the mounting locations being comprised of the second material.

57. The snowboard binding according to claim 51, wherein the upper region includes an upper margin along the upper end thereof comprised of a material that is different from the first material and has a stiffness that is less than the first stiffness.

Sub 9127 ~~58.~~ The snowboard binding according to claim 57, wherein the upper region further includes opposing side margins comprised of a material that is different from the first material.

~~55~~ ~~59.~~ The snowboard binding according to claim ~~58~~<sup>57</sup>, wherein the side margins extend from the upper margin to the lower region.

~~58~~ ~~60.~~ The snowboard binding according to claim ~~59~~<sup>55</sup>, wherein at least one of the upper margin and the side margins is comprised of the second material.

~~57~~ ~~61.~~ The snowboard binding according to claim ~~60~~<sup>56</sup>, wherein each of the upper margin and the side margins is comprised of the second material.

Sub 9137 ~~62.~~ The snowboard binding according to claim 51, further comprising a forward lean adjuster mounted on a lower end of the upper region to engage the heel hoop.

~~53~~ ~~63.~~ The snowboard binding according to claim ~~61~~<sup>47</sup>, wherein the highback is mounted to the baseplate for lateral rotation about a vertical axis.